REDUCTION OF Streptococcus mutans AND ENHANCEMENT OF CALCIUM LEVEL ON CHILDREN AGE 8-*10'S* SALIVA AFTER CONSUMPTION OF YOGHURT

ABSTRACT

Background: There are a lot of ways done to prevent caries, however they are still consider less effective. Yoghurt is one of the probiotics having certain microorganism which in specific amount can give benefits for host health. Most of the yoghurt content are laktat acid bacteria Lactobacillum class and Bifidobacterium as well as calcium. Yoghurt (contain Lactobacillus acidophilus and Bifidobacteria) are expected to be an alternative strategy for preventing caries. **Purpose:** To study reduction of Streptococcus mutans and enchancement of calcium level on children age 8-*10's saliva after yoghurt consumption*. **Method:** Fourteen children age 8-10 devided into two groups. Streptococcus mutans and calcium level were taken before treatment then both group were not given anything for 7 days. After that, group A were given yoghurt and group B were given mineral water (as the control group) for 14 days. Then, Streptococcus mutans and calcium level were taken again. Streptococcus mutans were counted by Colony Counter and Calcium level counted by Spektrofometer Serapan Atom. Finally, the results were analyzed by Paired T-Test and Independent T-Test. **Result:** There were significant differences between the group given yoghurt and the group given mineral water. **Conclusion:** After consumption Yoghurt compared to before. The calsium level was increased and the amount of Streptococcus mutans was decreased in group A after yoghurt comsumption ($p<0,05$). There was significan different group A and group B after consumption yoghurt and mineral water ($p<0,005$)

Keywords: Streptococcus mutans, calsium, Lactobacillus acidophilus dan Bifidobacteria, caries.

PENURUNAN JUMLAH *Streptococcus mutans* DAN PENINGKATAN LEVEL KALSIUM PADA SALIVA ANAK USIA 8-10 TAHUN SETELAH KONSUMSI YOGHURT

ABSTRAK

Latar belakang: Sudah dilakukan banyak cara untuk mencegah karies, tetapi dirasa masih kurang efektif. Yoghurt merupakan salah satu produk probiotik yang memiliki kandungan bakteri asam laktat golongan Lactobacillum dan Bifidobacterium serta mengandung kalsium. Minuman Probiotik (Lactobacillus acidophilus dan Bifidobacteria) diharapkan dapat menjadi strategi alternatif pencegahan karies. Yoghurt adalah mikroorganisme yang dalam jumlah tertentu dapat memberikan keuntungan terhadap kesehatan host. **Tujuan:** Untuk mengetahui penurunan jumlah Streptococcus mutans dan peningkatan level kalsium pada saliva anak usia 8-10 tahun setelah mengkonsumsi yoghurt. **Metode:** 14 anak usia 8-10 tahun dibagi menjadi 2 kelompok. Sebelum diberi perlakuan, kedua kelompok tidak mengkonsumsi yoghurt dan air mineral kemasan sealam 7 hari. Kemudian kelompok A mengkonsumsi yoghurt dan kelompok B mengkonsumsi air minerak kemasan. Streptococcus mutans dihitung dengan Colony Counter dan level kalsium dihitung dengan Spektofotometer Serapan Atom serta hasil di analisis menggunakan uji Paired T-Test and Independent T-Test. **Hasil:** Terdapat perbedaan yang signifikan antara kelompok A mengkonsumsi yoghurt dan kelompok B mengkonsumsi air mineral kemasan. **Kesimpulan:** Terdapat perbedaan signifikan sebelum dan setelah mengkonsumsi yoghurt. Peningkatan level kalsium dan penurunan Streptococcus mutans pada kelompok A setelah mengkonsumsi yoghurt ($p<0,005$). Terdapat perbedaan signifikan antara kelompok A dan kelompok B setelah mengkonsumsi yoghurt dan air mineral kemasan ($p<0,005$).

Kata kunci: Streptococcus mutans, kalsium, Lactobacillus acidophilus dan Bifidobacteria, caries.